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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,743	07/13/2005	David James Hamilton	031749/286126	3033

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EXAMINER

CHUNG, PHUNG M

ART UNIT	PAPER NUMBER
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2138

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/518,743

Applicant(s)

HAMILTON ET AL.

Examiner

Phung My Chung

Art Unit

2138

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-55 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/17/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

1. **Information Disclosure Statement by Applicant (IDS):**

The document D2: XP10094549 in the copy of International Preliminary Examination Report for international application No. PCT/GB03/02599 completed November 2, 2004, is noticed. However, applicant is requested to provide the aforementioned document so that examiner can be consider it fully.

2. **Drawings:**

Figures 1,4,, 79, 18 and 19 are objected to because each of the rectangular boxes should label with numbers and should contain a descriptive label so that the function of each rectangular box becomes appearance. Correction is required.

3. **Claims:**

Claims 1-23, 35-46, 48-49 and 51-55 are objected to because the method steps, for example: optimizing an input digital test signal;

Applying a...;

Monitoring...;

Using the fault free...;

Determining...;

Applying...;

Varying...;

Involving changing the size...; and, these method steps should have a flow chart or flow diagram showing these steps or these features should be canceled from the claim.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 47 is rejected under 35 U.S.C. 101 because this claim merely recites a computer program for improving testing of an analogue or mixed signal circuit using a digital signal, the computer program being provided preferably on a data carrier or computer readable medium and having code or instructions for optimizing an input digital test signal is not limited to tangible embodiments. Therefore, it is not patentable under 35 U.S.C. 101.

Single means claims

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. *Claims 1, 22-24 and 34 are rejected under 35 U.S.C. 112 , first paragraph, as a single means or step claims (i.e., it recites the method step: optimizing an input digital test signal) recitation does not appear in combination with another recited elements of means or step. Thus, claims 1, 22-24 and 34 recite only a single means or step to cover every conceivable means for achieving the stated property, is subjected to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d, 714-715, 218 USPQ 195, 197 (Fed Cir. 1983). (See MPEP 2164.08(a)).*

Claim Rejections - 35 USC § 112

8. The following claims are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 3, line 2, "for example" is vague and indefinite.

As per claim 4, lines 1-2, "wherein the step of applying a plurality of digital input signals..." does not have a clear antecedent basis.

As per claim 9, line 3, "such as" is vague and indefinite.

As per claim 16, "wherein digital outputs form ... to determine the optimum digital input signal" is not clear as to what it means. Anything that follows after "wherein" should be mentioned in the previous steps.

As per claim 17, lines 2-3 "wherein a fault detection ratio..." is not clear as to what it means. Anything that follows after "wherein" should be mentioned in the previous steps.

As per claim 20, lines 2-3, "wherein an exhaustive evaluation ..." is not clear as to what it means.

As per claim 22, line 3, "for example..." is vague and indefinite.

As per claim 24, line 3, "such as..." is vague and indefinite.

As per claim 25, line 2, "for example..." is vague and indefinite.

As per claim 27, line 2, "wherein the means for applying..." does not have a clear antecedent basis.

As per claim 29, line 3, "may be" a positive term should be used.

As per claim 30, line 2, "wherein the means applying..." does not have a clear antecedent basis.

As per claim 31, line 2, "wherein the means monitoring..." does not have a clear antecedent basis.

As per claim 32, line 2, "wherein the means monitoring..." does not have a clear antecedent basis.

As per claim 33, lines 2-3, "further comprising means for determining a figure of merit...all of these" the inter-connection and/or inter-relation between this means and the previous means is unclear.

As per claim 42-46, 48-49 and 53-55 are improper hybrid claims. This is because system claims and method claims can not be claimed in the same claim.

As per claim 50, lines 2-3, "the fault free and faulty circuits" does not have a clear antecedent basis.

As per claim 51, lines 6-7, "the means for comparing" should be changed to
- - the step for comparing - -.

As per claim 52, line 2, "for example" is vague and indefinite.

As per claims 2, 5-8, 10-15, 18-19, 21 and 35-41 are also rejected because they dependent upon the rejected based claims.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-2, 12, 16, 23-25, 31-32, 34-41, 47 and 50-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Balivada et al (XP-000636623, "A Unified Approach for Fault Simulation of Linear Mixed-Signal Circuits").

As per claims 1-2, 12, 16 and 23, Balivada et al disclose a method, comprising:
Optimizing an input digital test signal by applying a plurality of different digital inputs to a fault free circuit and a faulty circuit, preferably software-based simulations of the fault free and faulty circuits; monitoring the corresponding outputs of the fault free and the faulty circuits for each input, and using the fault free and the faulty outputs for each input to select an improved test input as part of an optimization procedure. (See pg. 38, Fig. 12 and section 6.2).

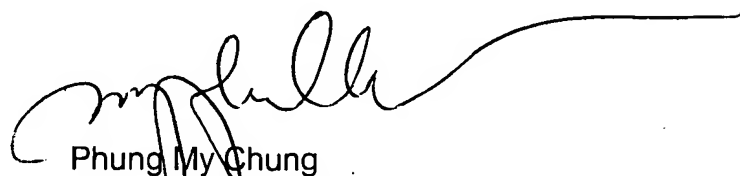
As per claims 24-25, 31-32, 34-41, 47 and 50-51, these claims are rejected under similar rationale as set forth in claims 1-2, 12, 16 and 23.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung My Chung whose telephone number is 571-272-3818. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Phung My Chung
Primary Patent Examiner
Art Unit 2138